

Department of Trade and Industry

The department decided to explore virtualizing its physical servers to reduce power consumption, free data centre floor space and reduce costs. Using PlateSpin® Recon from NetIQ®, the department was able to identify the best candidates for virtualization, determine the optimal hardware for the virtualized environment and estimate the final cost savings.



Overview

The South African Department of Trade and Industry (DTI) works to ensure economic development and employment throughout South Africa. The DTI's tasks, such as producing statistics and promoting inward investment, require significant IT infrastructure.

Challenge

The DTI had already completed a pilot of server virtualization for its disaster recovery. The department wanted to extend the benefits of server virtualization to its main production site, which was running out of floor space and power.

Many servers only average 5 to 10 percent utilisation, yet experience peaks and troughs of use at different times. It can be a significant challenge to size new physical host servers correctly for a given set of virtual machines. The DTI needed a way to determine which production servers could be virtualized together on the same hardware, based on expected performance and availability demands.

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POPPY TSHABALALA

Chief Information Officer
Department of Trade and Industry

Solution

“We needed to determine which machines would be the easiest and most effective to virtualize—in a nutshell, those with the lowest average utilisation,” said Poppy Tshabalala, chief information officer at the DTI. “PlateSpin Recon gave us a detailed view, pinpointing the servers that would most benefit from being virtualized.”

Of the 55 servers in the DTI's primary data centre, some could not be virtualized because of vendor software licensing conditions, while others running shared services for other departments fell outside the scope of the project. The DTI asked LSD to monitor 23 servers in total. The combined team used PlateSpin Recon to monitor the DTI servers for just over one month, then produced a detailed report with recommendations for virtualization.

“PlateSpin Recon worked unobtrusively in the background and had no impact on the performance or availability of our production systems,” said Tshabalala. “At the end of the monitoring period, it delivered extremely detailed and comprehensive reports, showing us exactly what each server was doing over the period—right down to the temperature of the hardware.”

When planning a server virtualization and consolidation project, IT teams must consider more than just the average utilisation of each server. For example, it might seem that 10 dual-core servers, each with average utilisation of 5 percent, could be comfortably accommodated

**the dti**

Department:
Trade and Industry
REPUBLIC OF SOUTH AFRICA

At a Glance

■ Industry

Federal Government

■ Location

South Africa

■ Challenge

The department needed a way to determine which production servers could be virtualized together on the same hardware.

■ Solution

Use PlateSpin Recon to gain the concrete data necessary to build a server virtualization strategy.

■ Results

- + Provided consolidation scenarios
- + Offered a clear view of the pattern of resource use across the entire infrastructure
- + Identified 11 servers the department could virtualize and consolidate onto a single virtual host server

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as virtual machines on a single new dual-core server. However, if all 10 of the virtual servers peak at 80 percent utilisation between 9:00 a.m. and 11:00 a.m. on a Monday morning, even more powerful host hardware could be massively underpowered.

PlateSpin Recon gave the DTI the concrete data it needed to build its server virtualization strategy by providing consolidation scenarios showing how the peaks and troughs of different combinations of virtual servers would combine when those workloads ran together.

Results

Using PlateSpin Recon, the DTI gained a clear view of the pattern of resource use across its infrastructure. PlateSpin Recon identified 11 servers the department could virtualize and consolidate onto a single virtual host server. The DTI plans to do so on a two-node server

cluster for high availability. This change will produce a 75 percent reduction in power and cooling use, making the department’s main production site much less expensive and more environmentally friendly. The DTI will also save significantly in the ongoing acquisition of server hardware and will be able to focus any investment in server upgrades on just two servers.

“Beyond the savings in hardware and operational costs, moving to a virtualized server environment means that we’ll eliminate all of our potential single points of failure,” said Tshabalala. “Currently, a failure of one of the 11 servers will completely knock out the service running on that machine. In the future, the loss of individual processors or even one entire server from the cluster will not cause any downtime.”



Denmark

+45 45 16 00 20

France

+33 1 55 70 30 13

Germany

+49 89 42094 0

Italy

+39 02 366 349 00

Netherlands

+31 172 50 55 55

Poland

+48 22 537 5000

Portugal

+55 11 3627-0900

Spain

+34 91 640 25 25

Sweden

+46 8 752 25 00

NetIQ

Worldwide Headquarters

Houston, Texas

713 548 1700

888 323 6768

www.netiq.com